UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,250	10/12/2001	Takuhito Ueno	110863	8843

25944   7590   06/18/2010
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EXAMINER
RUDOLPH, VINCENT M

ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
06/18/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
	09/975,250	UENO ET AL.
Office Action Summary	Examiner	Art Unit	
	Vincent Rudolph	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 March 2010</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>16-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>16-25</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>16 September 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail. Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 16, 18-21, 23 and 25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Miyazaki ('581) in view of Oida ('668) and Itoh ('995).

Regarding claim 16, Miyazaki ('581) discloses an image forming apparatus (**See

Figure 18, Element 1000b**) having a power save mode and a normal mode (energy

saving or low power consumption mode and a normal operation mode, **See Col. 6, Line

22-25**) that includes an image forming portion (print buffer, **See Figure 18, Element

1116**) that outputs an image corresponding to data (stores the received data prior to

transferring it to print head, **See Col. 9, Line 25-28**) from an external device being

located outside of the image forming apparatus (receives from either a user that scans a

document to be read and converted to image data or from the communication unit for

receiving data, **See Figure 18; Col. 8, Line 61-66**), a controller (main control unit, **See

Figure 18, Element 1112**), which includes a processor (CPU, **See Figure 3, Element

12**) that is in an on-state in the normal mode to control the image forming portion (the

CPU controls the printer unit, **See Figure 3, Element 200; Col. 4, Line 14-15**), and

controls the image forming portion to output the received data after a period of transition

from the power save mode to the normal mode (while returning from the energy saving

mode to the normal operation mode, **See Col. 9, Line 46-55**, a period of transition is needed to supply power back to the printer, **See Col. 10, Line 5-6**), and a communication interface (communication unit, **See Figure 18, Element 1103**) that receives the data from the external device (receives data from a destination station, **See Col. 8, Line 62-66**).

Miyazaki ('581) does not disclose that the processor is in an off-state in the power save mode.

Oida ('668) discloses the processor (CPU-P, **See Figure 3; Col. 5, Line 53-57**) is in an off-state in the power save mode (the clock speed in the CPU is stopped, thus being in an off-state, **See Col. 11, Line 4-5**, in the sleep mode (state B), **See Col. 11, Line 1**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include an off-state, such as the one disclosed within Omizo ('151), and incorporate it into the apparatus of Miyazaki ('581) because it allows the device to consume less power whenever it is in an off-state rather than always being on and consuming constant power.

Miyazaki ('581) and Oida ('668) combined do not disclose a communication interface that controls a speed for receiving the data during the period of transition.

Itoh ('995) discloses a communication interface (**See Figure 1, Element 36**) that includes a receiver (buffer, **See Figure 2, Element 36a**) and is configured to control a speed for receiving the data during the transition period (controls the speed that the data is being received, **See Col. 5, Line 15-18**, as determined by the CPU, **See Col. 5,**

Line 3-10, wherein the data is controlled to be received either at the normal speed or at a lower speed depending on the capacity of the storage during the operation period of either transmitting or receiving data, **See Col. 6, Line 15-23**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling a speed for receiving data, such as the one disclosed within Ito ('995), and incorporate it into Miyazaki ('581) because it prevents the printer from receiving more data than it is able to store and overload the memory and cause an error as a result.

Regarding claim 18, Miyazaki ('581) does not disclose that the communication interface controls the speed for receiving the data based on a predictive time length of the period set in the communication interface.

Itoh ('995) discloses that the data received is controlled based on the setting of the timer (**See Col. 5, Line 19-25**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include a time length for controlling the speed of receiving data, such as the one disclosed within Itoh ('995), and incorporate it into Miyazaki ('581) because it allows a printer to still receive data while completing another task for a designated amount of time without the need to temporarily stop the incoming data.

Regarding claim 19, the combination of Miyazaki ('581), Oida ('668) and Itoh ('995) together discloses a storing portion that stores the received data (**See Miyazaki ('581), Col. 9, Line 22-24**) and the communication interface controls the speed for receiving data based on a residual capacity of the storing portion (if the memory falls

below a predetermined level, the speed for receiving data is reduced, **See Itoh ('995),
Col. 5, Line 26-34**).

Regarding claim 20, the combination of Miyazaki ('581), Oida ('668) and Itoh
('995) together discloses controlling the speed for receiving the maximum data payload
based on the data sent from the external device (depending on the amount of data sent
from the computer, if it overloads the maximum capacity of the memory, the speed to
receive the data is reduced, **See Itoh ('995), Col. 5, Line 65-Col. 6, Line 13**).

Regarding claim 21, the combination of Miyazaki ('581), Oida ('668) and Itoh
('995) together discloses controlling the data based on a reply rate of an ACK (data is
successfully being transferred from the computer) and NAK (error) response (the data
being transferred is either accepted or denied from the computer, depending on the
capacity of the memory, which reduces the receiving speed of the data if fallen below a
predetermined level, **See Itoh ('995), Col. 5, Line 65-Col. 6, Line 13**).

Regarding claim 23, Miyazaki ('581) discloses that the image forming device is
coupled to the external device through a serial bus (interface signal line, **See Figure 18,
Element 1111; Col. 9, Line 31-33**), and the communication interface decides a mode
shift by detecting change of an input control signal of a parallel interface, the mode shift
including a shift from or to the normal mode (a command to shift the printer to normal
mode and be ready to print if it is not in the energy saving mode, **See Col. 10, Line 10-
17**).

Regarding claim 25, the combination of Miyazaki ('581), Oida ('668) and Itoh
('995) together discloses that the image forming device is coupled to the external device

through a serial bus (interface signal line, **See Miyazaki ('581), Figure 18, Element 1111; Col. 9, Line 31-33**) and the communication interface decides the speed for receiving the data based (1) notices that the reception of data is normally completed as well as (2) not normally completed (whether the data being transferred is either accepted or denied, the computer notices since the transfer of data continues or abruptly stops, depending on the capacity of the memory, which reduces the receiving speed of the data if fallen below a predetermined level, **See Itoh ('995), Col. 5, Line 65-Col. 6, Line 13**).

Claims 17, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki ('581) in view of Oida ('668) and Itoh ('995) as applied to claim 16, and further in view of Kawase ('130).

Regarding claim 17, Miyazaki ('581) does not disclose having the controller set information in the communication interface for controlling the speed for receiving the data as well as having the communication interface configured to control the speed for receiving the data based on the information set by the controller.

Itoh ('995) discloses a controller (CPU, **See Figure 1, Element 31**) that sets information in the interface for controlling the speed for receiving the data (**See Col. 5, Line 26-27**), and, as a result, the communication interface is configured to control the speed for receiving the data based on the information set (**See Col. 5, Line 15-19**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to including setting information for controlling a speed for

receiving data, such as the one disclosed within Ito ('995), and incorporate it into

Miyazaki ('581) because it allows to set the printer for receiving a certain amount of data

and well as specify the speed for receiving the data in order to prevent overloading of

the memory.

The combination of Miyazaki ('581) and Itoh ('995) fail to disclose setting the

information before going into an off-state.

Kawase ('130) discloses setting information prior to going into an off-state

(setting the power-save mode, **See Col. 13, Line 35-45**, before going into an off-state of

the power saving mode, **See Col. 14, Line 15-30**).

It would have been obvious to one of ordinary skill in the art at the time of the

invention by the applicant to include setting the information before going into an off-

state, such as the one disclosed within Kawase ('130), and incorporate it into the

controller of Itoh ('995) used within Miyazaki ('581) because it allows different speeds

(modes) to be set before powering down so that optimum power conservation as well as

data communication speed is able to occur.

Regarding claim 22, Miyazaki ('581) discloses that the image forming device is

coupled to the external device through a serial bus (interface signal line, **See Figure 18,**

Element 1111; Col. 9, Line 31-33).

Miyazaki ('581) does not disclose that the communication interface is configured

to decide whether or not the data including a packet is directed to the image forming

apparatus, by referring to an address area in the packet, and to respond to the data

being addressed to the image forming apparatus whenever the information is transmitted from the external device.

Kawase ('130) discloses transmitting data that includes packets to an image forming apparatus (**See Figure 1, Element 121; Col. 11, Line 18-30**).

The combination does not *expressly* disclose an address area in the packet is referred to in order to determine that the image forming apparatus is in fact the destination.

However, **official notice** is taken that at the time of the invention, it was known that there was a header section within a packet that references an address of a network destination where the packet was intended to be transmitted.

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include packets whenever transmitting data, such as the one disclosed within Kawase ('130), and incorporate it into Miyazaki ('581) because it is able to provide data using a fast communication for multiple devices so that the devices know the location of the data being sent as well as be able to respond to commands over the network.

Regarding claim 24, Miyazaki ('581) discloses that the image forming device is coupled to the external device through a serial bus (interface signal line, **See Figure 18, Element 1111; Col. 9, Line 31-33**).

Miyazaki ('581) does not disclose that the communication interface decides the speed for receiving the data based on a setting of a data payload in a packet from the external device.

Itoh ('995) discloses controlling the speed for receiving the maximum data payload based on the data sent from the external device (depending on the amount of data sent from the computer, if it overloads the maximum capacity of the memory, the speed to receive the data is reduced, **See Col. 5, Line 65-Col. 6, Line 13**).

Kawase ('130) discloses transmitting data that includes packets to an image forming apparatus (**See Figure 1, Element 121; Col. 11, Line 18-30**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling the speed for receiving the maximum data payload that includes packets based on the amount being whenever transmitting data, such as the one disclosed within Kawase ('130) and Itoh ('995), and incorporate it into Miyazaki ('581) because it is able to provide data using a fast communication for multiple devices without the need to temporarily suspend the incoming data or resend the data completely because of an error from overloading.

Response to Arguments

Applicant's arguments, see remarks filed 3/8/2010, with respect to the rejection of claims 16, 18-21, 23 and 25 under Miyazaki in view of Omizo and Itoh as well as claims 17, 22 and 24 under Miyazaki in view of Omizo, Itoh and Kawase have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground of rejection is made in view of Miyazaki in combination with Oida and Itoh as applied to claims 16, 18-21, 23 and 25 as well as claims 17, 22 and 24 in view of Miyazaki in combination with Oida, Itoh and Kawase. Thus, the prior art of Oida is used in combination with Miyazaki, and together,

along with Itoh, does meet each limitation of the claims as disclosed within the rejection

above.

　　　The applicant also argues that the prior art does not disclose that the interface

controls the speed for receiving the data. Itoh does meet this limitation as disclosed

within the rejection above. According to Itoh, the buffer within the interface controls the

speed to receive a fraction of the data (**See Col. 5, Line 15-18**) based on the

determination made by the CPU (**See Col. 5, Line 3-10**). Further, the transition period

for the receiving speed takes place during the normal speed or at a lower speed

depending on the capacity of the storage during the operation period of either

transmitting or receiving data (**See Col. 6, Line 15-23**). Thus, the interface is able to

control the speed data is received in order to send it to the RAM without overloading it.

As a result, the prior art of Itoh does meet the limitation of the claims as disclosed within

the rejection above.

　　　Based of these facts as well as having the applicant's arguments been fully

considered and persuasive, **THIS ACTION IS MADE NON-FINAL**.

Conclusion

　　　Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Vincent Rudolph whose telephone number is (571) 272-

8243. The examiner can normally be reached on Monday through Friday 8 A.M. - 4:30

P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vincent Rudolph
Examiner
Art Unit 2625

/Vincent Rudolph/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625